

certain times of the year maintain a ready sale; in fact the author's experience is that at times the demand for sweepings from wood paving is greater than the supply. When the demand is slack much is given away, or is used as dressing on lands belonging to the municipalities. If it were not for the difficulty of transit, land occupiers would find the sweepings most useful and economical, and of late years traction engines are called into use for transporting large quantities into the country. Seaside towns have the advantage of being able to send out the unsaleable portions in barges, and drop them at a point where the tides will not return them. Other towns, having a system of canals, are able economically to send away the sweepings in boats. In some towns the holders of allotment grounds, under the corporation, are supplied with all they desire, gratuitously.

When the streets are dry the usual practice is for a water cart to precede the brush, otherwise a cloud of dust is raised. This is of course more especially the case with the mechanical sweepers, but even the hand broom may make things very unpleasant and unsanitary. Attempts have been made to combine a rotary brush and a water sprinkler in the same machine; various types having been tried by eight of the twenty towns, with different results. The experience of five towns was unsatisfactory; two found the combination a great success, while the remaining one engineer used a petrol water van and sweeping machine combined, and found that it did its work in a satisfactory manner, but was unsuited to city work.

So far the author has endeavored, with the kindly help afforded by very full returns of the practice of his confreres, to give a concise account of the average method of collecting and distributing street sweepings in the large towns of Great Britain and Ireland. Each place has its own peculiarities of situation and environment which dictate largely the methods to be employed, but all are directed to the same end, namely, a thorough endeavor not only to render the streets sanitary and free from effluvia, but to maintain them in a neat and tidy condition, clear of the hourly deposit of the rubbish of a great city. It is not possible to generalize as to the cost, because there is no prescribed method of keeping the accounts of county boroughs, and therefore comparison is impossible. From his own experience the author is of the opinion that a rate of 4 pence or 5 pence in the pound per annum would provide a sum equivalent to the requirements of most places, and may be in excess of that spent by some in the ordinary every day duties of street cleansing. At times all calculations and the most careful estimates are rendered useless by an unusual continuance of severe weather. A heavy fall of snow may occasion an expenditure of hundreds or even thousands of pounds. Coming generally at a time of the year when work is most difficult of obtainment the opportunity of the "unemployed" occurs, and provides for them something to do, which is as, or more, beneficial to the community than much of the so-called relief work. It is not the custom to employ soldiers to clean the streets of the towns of Great Britain and Ireland as has been done in some continental cities.

Snow, a beautiful object on the mountain or country side, is a visitant dreaded by the city engineer; its coming is uncertain, and the amount cannot be foretold. Even latitude is not a guide, for although as a rule the heaviest falls occur in the north and the midlands, yet there have been years when the south of England has been the subject of a blizzard and a snow covering a third of a meter in depth, while the northern towns have experienced complete immunity.

Some towns have local acts of parliament which enable the police to call upon the householders to clear the snow from off footways in front of their premises, and this is the practice in about one-half of the towns noted. But even in those towns there are many miles of footways outside unoccupied premises, public buildings, places of worship and blank walls, bridges and viaducts where the paths would never be cleared at all if the municipality did not do it. The authorities of the other ten towns undertake the whole duty. By whomsoever the snow is cleared from the path it finds its way to the road, and then has to be removed at the public expense.

Every town of any importance makes careful and systematic arrangements in advance to deal with a fall of snow, if it does come. The ordinary sweepers are warned to assemble at given centres where foremen can take charge and direct their labors. If the weather is very severe, many workmen are thrown out of their ordinary employment and take temporary service with the corporation, so that there is not much difficulty in procuring hand labor. It is very important to attack a fall at its commencement, and, if possible, keep the lines of vehicular traffic open. Where there is a network of tramways the stoppage of one car may result in a complete dislocation of the service to a district. All towns employ snow plows of one form or another, a very usual pattern being a diagonal board or plate on wheels drawn along by horses and delivering the snow at one side. This is very trying work for horses and cannot be resorted to unless the snow is newly fallen and before it has been trodden hard. V-shaped plows propelled by an electric motor car are used in some towns to clear the tramway tracks.

Having succeeded in heaping the snow into ridges the duty follows of removing it from the street as expeditiously as possible, but at times and in some places much difficulty is experienced in getting an adequate supply of horses and carts. If the fall of snow has been very heavy, much ordinary work comes to a standstill, and the carts usually so employed are available for snow clearing. The very efforts made for a resumption of traffic, however, make the usual channels of employment again available and this extraneous help disappears. A prudent superintendent makes his arrangements before the winter sets in for a supply of carts to be sent to different points when necessary.

In order to reduce the heavy outlay involved in clearing a town of its snow it is necessary to have as many points as possible to which the carts may proceed to discharge their burdens, the cost of the cartage being a serious item. Vacant sites afford convenient places of deposit, provided they are not too near dwellings. Rivers, especially when they are tidal, are very suitable, as any quantity can be discharged into them without inconvenience, but the length of haulage may be considerable and increase the cost. In some towns a portion of the snow is shot into sewer manholes, but this way can only be resorted to when the sewer is capacious and a strong body of sewage running; then the snow is quickly melted by the high temperature of the sewer air and disappears; but the practice should not be carried out with snow contaminated with a large proportion of street dirt.

The practice of using salt for the purpose of enabling the snow to be cleaned easily and expeditiously is resorted to in many towns, but there the authorities make a sort of apologetic excuse for so doing by stating that the practice is only resorted to in "special cases" or, "only on the tramway track" or, but "very little used." There is no doubt that the use of salt is objected to by a large section of the